

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2003P08319WO	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/DE2004/001153	International filing date (day/month/year) 02.06.2004	Priority date (day/month/year) 10.06.2003
International Patent Classification (IPC) or national classification and IPC		
Applicant SIEMENS AKTIENGESELLSCHAFT		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 9 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 4 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

☐ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☐ Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-14 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-13 received by this Authority on 30.03.2005 with telefax
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 1/2-2/2 _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-13</u>	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	<u>1-13</u>	NO
Industrial applicability (IA)	Claims	<u>1-13</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

1. This report makes reference to the following documents:

D1: WO 01/86851 A (ANSON COLIN I; HEWLETT PACKARD CO (US)) 15 November 2001 (2001-11-15)

D2: WO 02/052869 A (CELLGLIDE TECHNOLOGIES CORP; WHITE DUNCAN ROHAN; SATT AHARON (IL); LA) 4 July 2002 (2002-07-04)

2.1 The **amended claim 1** is a combination of the original claims 1 and 2.

D1, which is considered to represent the closest prior art, discloses (corresponding to the features of the **amended claim 1**) (see, in particular, page 4, line 28 to page 5, line 11, page 5, lines 26-27, page 6, lines 5-26, and figures 1 and 2) a process for data traffic separation (see page 4, lines 28-31) in a packet-oriented mobile radio network (see page 5, lines 26-27, and element "17" in figure 1), in which incoming data traffic consisting of a plurality of layer2 connections (see "user packet-data

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traffic", page 4, line 29; note that, according to D1, data traffic between a mobile terminal and a service provider consists of a specific service, that is, the data traffic consists of PDP contexts) is separated in a network node (see element "50" in figure 2) of the mobile radio network in a controlled manner with respect to connection- and/or data stream-specific handling (see page 4, lines 28-31, page 5, lines 6-8 and page 6, lines 5-12) and routed (see page 5, lines 9-11, and page 6, lines 14-18) in a distributed manner (see data stream "53" in figure 2) via a processing unit (see element "60" in figure 2) which handles it in an appropriate manner, wherein a control function (see element "50" in figure 2), decides on the basis of application-specific information and/or local information (see page 5, lines 6-8, and page 6, lines 9-10; note that, according to D1, the decision whether to route a data connection via a processing unit depends on the application, that is, on the target of the data stream and thus the type of application (D1 : "value added service VAS") and on the internal policy of the control function, that is, which data stream/which application is defined as a "value added service VAS" and must be recognized as such) whether a layer2 connection of the data traffic should be routed via a processing unit (see element "60" in figure 2), where connection- and/or data stream-specific handling is carried out on the basis of application-specific information and/or local information (see page 5,

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lines 9-11, and page 6, lines 14-26; note that, according to D1, processing of the data stream depends on the particular application (see page 6, line 15) and on internal access control data (see page 6, lines 23-24)).

The subject matter of the amended claim 1 differs from the disclosure of D1 with respect to only two, unrelated features, as follows:

- data traffic separation is decided **inside an access network node**, that is, both the control function and the local information are provided **in an access network node**, and
- data traffic consists of a plurality of layer2 connections **each comprising multiple data streams**, that is, each service provider (layer2 connection) can supply **multiple services** (data streams).

Note that these distinguishing features do not interact functionally and represent only an aggregation of features.

The **first** partial problem addressed by the present invention may therefore be considered that of reducing the number of interfaces between network elements in order to improve the efficiency and reliability of the process. The **second** partial problem addressed by the present invention is that of increasing the variety of data which a data provider makes accessible to the user via data

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traffic.

However, arranging the control function for data traffic separation and providing the internal information (policy) required therefor **inside the access network node** is only a **routine possible design step**: see, for example, **D2** (in particular page 8, penultimate line to page 9, line 5, and page 9, lines 20-25; note that, according to **D2**, a data stream in a control function (see **D2**, "traffic shaper") is separated on the basis of information data from an internal information unit (see **D2**, "policy processor"); thus, both said elements can be arranged inside the access network node (see **D2**, "GGSN")). Application of this principle to the process known from **D1** therefore merely represents an obvious possible design step to a person skilled in the art in order, for example, to solve the technical problem of improved system integration, that is, reduction in the number of interfaces between network elements.

Further, the feature of routing **multiple data streams** per layer2 connection in data traffic is only one **obvious** possibility which a person skilled in the art would choose according to the circumstances in order to solve the problem of interest, **without** thereby being inventive: see, for example, **D2** (in particular, page 17, lines 3-18; note that in **D2** data stream separation and handling are handled individually for layer2 connections and the data streams contained therein

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(with, for example, different QoS requirements).

Therefore, the subject matter of the amended claim 1 does not demonstrate an inventive step (PCT Article 33(3)).

- 2.2 The same comments as those made above in 2.1 also apply to the amended independent claim 11, since this claim contains the same features combination as claim 1 in the form of a system claim.

Therefore, the subject matter of the amended claim 11 likewise fails to demonstrate an inventive step (PCT Article 33(3)).

- 2.3 **Dependent claims 2-10, 12 and 13** do not contain any additional features which, in combination with the features of any claim to which they refer back, could lead to subject matter involving an inventive step, since the features of these claims are only developments which are also known in principle from **D1** (see, in particular, page 4, line 28 to page 5, line 11 and page 5, line 26 to page 7, line 8) and **D2** (see, in particular, page 7, lines 9-23, page 8, line 2 to page 9, line 5 and figure 3) or represent obvious design details generally known to a person skilled in the art of mobile radio networks and corresponding data traffic separation processes.

Therefore, dependent claims 2-10, 12 and 13 likewise fail to meet the requirements of PCT

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Article 33(1) and (3).

3. Further observations

- 3.1 The expression "more particularly" in **claim 3** should be avoided, since it can introduce ambiguity (see PCT International Search and Preliminary Examination Guidelines, Part II, paragraph 5.40). An expression such as "more particularly" has no limiting effect on the scope of a claim, since the feature following the expression is considered entirely optional.

The same comments apply to the word "can" in **claim 11** (see the last line).

- 3.2 The features placed between parentheses in **claims 1-6, 9-11 and 13**, namely, "(GPRS)", "(PDP context)", "(internal policy)", "(AAA server)" and "(RADIUS)", are not reference signs within the meaning of PCT Rules 6.2(b) and 11.13(l) and (m). However, since reference signs have no limiting effect on a claim, it is unclear whether said features placed between parentheses represent limitations. Such features placed between parentheses are therefore not permitted (see PCT International Search and Preliminary Examination Guidelines, Part II, paragraph 5.11).

- 3.3 **Independent claims 1 and 11** have not been drafted in the **two-part form** defined by PCT Rule 6.3(b). However, in the present case the two-part form

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would appear to be appropriate. Accordingly, the features known in combination from the prior art (D1) should have been placed in the preamble (PCT Rule 6.3(b)(i)) and the remaining features specified in the characterizing part (PCT Rule 6.3(b)(ii)).

- 3.4 Contrary to PCT Rule 5.1(a)(ii), the description does not cite **D1 and D2** in the introductory part. Preferably, this should be done so as to make the inventive concept of the claimed substantive matter readily understandable.